Remarks

The Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-33 are pending in the application, with 1, 19, 20, and 26 being the independent claims. Claims 1, 19, 20, and 26 have been amended. These changes are believed to introduce no new matter, and their entry is respectfully requested. The above amendments seek to further assist the examiner in interpreting the scope of the claims. Further, based on the above amendment and the following remarks, Applicants believe the application is in condition for allowance and respectfully request that the Examiner reconsider all outstanding rejections and that they be withdrawn.

Description of the Invention

As is known in the art, the first three layers of the OSI model include (1) Physical Layer, (2) Data Link Layer, and the (3) Network Layer. Further, in the OSI model, the layers are distinguished by the type of processing that occurs on an incoming data stream where processing at a lower layer occurs before processing at a next layer occurs.

As described in the background section of the specification, in conventional cable television communications networks classifying and prioritizing signals occurs at the data link layer (See Paragraphs [0003]-[0006]). Classifying at the data link layer is disadvantageous because the resulting delay of classifying at the data link layer as opposed to the physical layer could be harmful to the performance of high priority to services (See Paragraph [0006]). Thus, the present invention seeks to minimize delay and the possible harmful effects thereof by classifying packets, before data link layer

processing occurs.   The method and system of the present invention are directed to classifying and prioritizing signals at the physical interface of a headend device (See Paragraph [0008]).   As described in the specification, a physical interface (PHY) "forms [a] physical layer interface."   See paragraphs [0028]-[0029].   Based on this description of a physical interface, one of ordinary skill in the art would understand classifying "at a physical interface" as classifying at the physical layer.

Claim 26 describes "A system for determining a priority classification of a burst at a physical interface... a classifier for detecting an identifier from the burst."   As described above, one of ordinary skill in the art would understand "at a physical interface" to mean at the physical layer.   This interpretation is further supported by the terms "burst receiver" and "burst" used in the claim.   The term "burst" generally refers to digital data at the physical layer (See Nazarathy Patent Col. 2 lines 8-35).   In view of the specification and the "determining a priority classification of a burst at a physical interface" clause in the preamble of claim 26, one of ordinary skill in the art would understand the limitation of "a classifier for detecting an identifier from the burst" to require detecting an identifier at the physical layer.   Based on how the layers of an OSI model are defined, detecting an identifier at the physical layer means detecting an identifier before data link layer processing occurs.

Rejections under 35 U.S.C. § 103

Claims 26-27 have been rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,490,727 ("Nazarathy Patent") in view of U.S. Patent Application No. 2002/0131413 ("Tsao Patent Application").   Applicants respectfully traverse.

The Examiner acknowledges that the Nazarathy Patent does not disclose the element of claim 26 of "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator." The Examiner contends that the teachings of the Tsao Patent Application render the omissions in the Nazarathy Patent obvious. Applicants respectfully disagree with the Examiner's contention.

In addition to reconsidering arguments presented in the previous response in view of the ***Description of the Invention*** provided above, Applicants would like the examiner to further consider additional arguments presented below that support: (1) the Tsao Patent Application does not discloses "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator," and (2) it would not have been obvious to one of ordinary skill in the art to use the teachings of the Tsao Patent Application to modify the Nazarathy Patent to achieve the essential features of claim 26.

Paragraph [0053] of the Tsao Patent Application describes "classifier sub-module 114 may classify the packet based upon: a source address, a destination address or other information such as a service class (e.g., constant bit rate), transport control protocol port, etc." The terms listed above refer to fields defined in known communications protocols. The known communication protocols that define the fields are used in layers above the physical layer. Thus, the Tsao Patent Application does not disclose where packets are classified by classifier sub-module 114 at the physical layer. Further, the Tsao Patent Application describes where packet arrival module 106 places a packet in one of queues 112_1-112_n and classifier sub-module 114 retrieves the same packet (i.e. packets at the same layer) from one of queues 112_1-112_n (See Fig. 2, Paragraphs [0026], [0029], [0051]-[0053]). Thus, the Tsao Patent Application does not disclose classifying

packets at the physical layer. The classifier in the Tsao Patent Application is similar to prior art classifiers described in the Background section of the Specification in that it does not classify packets <u>at the physical layer</u>. Because neither the Tsao Patent Application nor the Nazarathy Patent disclose "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator" claim 26 is patentable over the combination.

Further, it would not have been obvious to one of ordinary skill in the art to use the teachings of the Tsao Patent Application to modify the Nazarathy Patent to achieve the essential features of claim 26. One of the purposes of the system disclosed in the Nazarathy Patent is to create a system that can function with many cable modem standards (See Col. 11 lines 9-12). The system in the Nazarathy Patent does this by "'elongating the wire' from the burst receiver to the MAC layer." (See Col. 10 lines 42-47). As noted in the Narzarathy Patent this "elongation" actually creates additional delays in burst transmissions, which is viewed as inconsequential in view of the benefits of the system (See Col. 20 lines 9-24). Thus, the Nazarathy Patent actually teaches away from reducing delays at the physical layer. Because Nazarathy teaches away from reducing delays at the physical layer, one of ordinary skill in the art would not have modified the system in Nazarathy with the upper layer classifier in the Tsao Patent Application.

Because each dependent claim incorporates all of the elements of the independent claim from which it depends, as well as additional features, the above arguments made with respect to independent claim 26 apply a fortiori to claim 27. For at least this reason,

dependent claim 27 is also patentable.   Reconsideration and allowance of claim 27 is respectfully requested.

Claims 27-33 have been rejected under 35 U.S.C. 103(a) as being unpatentable over the Nazarathy Patent in view of the Tsao Patent Application and further in view of U.S. Patent 6,108,307 ("McConnell Patent").

Because each dependent claim incorporates all of the elements of the independent claim from which it depends, as well as additional features, the above arguments made with respect to independent claim 26 apply a fortiori to claim 28-33. Furthermore, the McConnell Patent does not disclose "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator"   of claim 26, but rather teaches a conflicting priority queuing approach.   Specifically, the McConnell Patent determines priority levels for packets based on the network connection.   McConnell Patent at abstract.   For at least these reasons, dependent claims 28-33 are also patentable. Reconsideration and allowance of claims 28-33 is respectfully requested.

The Examiner notes that claims 1-25 are method claims corresponding to system claims 26-33.   The Examiner indicates that claims 1-25 are analyzed and rejected as previously discussed with respect to claims 26-33.   Applicants respectfully traverse.

Independent claim 1 includes an element of "matching said identifier to a priority indicator to determine the priority classification."   Independent claim 19 includes an element of "matching said identifier to a priority indicator, said matching being implemented prior to protocol processing the burst."   Independent claim 20 includes an element of matching said identifier from each burst to a priority indicator, wherein said priority indicator represents one of two or more available priority levels."   The

arguments presented above relative to the "a classifier for detecting an identifier from the burst, wherein said identifier is matched to a priority indicator" apply to each of these elements. Thus, for at least the reasons described above with respect to claim 26, claims 1, 19 and 20 are allowable over the combination of the Nazarathy Patent, the Tsao Patent Application and the McConnell Patent. Reconsideration and allowance of claims 1, 19, and 20 is respectfully requested.

Because each dependent claim incorporates all of the elements of the independent claim from which it depends, as well as additional features, the above arguments made with respect to independent claims 1, 19, and 20 apply a fortiori to claims 2-18 and 21-25. For at least this reason, dependent claims 2-18 and 21-25 are also patentable. Reconsideration and allowance of claims 2-18 and 21-25 is respectfully requested.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Atty. Dkt. No. 1875.0480000

Prompt and favorable consideration of this Amendment and Reply is respectfully

requested.

Respectfully submitted,

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